

Notice of Allowability

Application No.

09/784,598

Examiner

Gary C. Vieaux

Applicant(s)

LAUXTERMANN ET AL.

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/18/2005.
2. ☒ The allowed claim(s) is/are 2,3 4, 5 and 6 (Now formally renumbered as claims 1-5).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

REASONS FOR ALLOWANCE

Amendment

The Amendment filed July 18, 2005 has been received and made of record. In response to the Final Office Action, claims 2 and 3 have been amended. Additionally, claims 1 and 7 have been cancelled.

Response to Arguments

Applicant's arguments with respect to claim 2 have been fully considered and are persuasive. The 103(a) rejection of claim 2 has been withdrawn.

Allowable Subject Matter

Claims 2-6 are allowed.

Regarding claim 2, the prior art is not found to teach or fairly suggest, in combination with the existing elements of the present claim as currently amended, a method for operating a CMOS image sensor in which said method includes:

a first phase or initialization phase, during which said photosensor elements and said storage means are initialized at a determined initialization voltage;

a second phase or exposure phase during which said photosensor element is released from said initialization voltage and generates charge carriers in proportion to its illumination, said photosensor element and said storage means being uncoupled from each other by means of the MOS transistor;

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a third phase or sampling phase during which said sampled signal which is generates and stored on said storage means by coupling said photosensor element and said storage means by means of the MOS transistor; and

5 a fourth phase or reading phase, during which said sampled signal which is stored on said storage means is read, said photosensor element and said storage means being uncoupled from each other by means of the MOS transistor,

and wherein during said fourth phase, said photosensor element is held at a voltage such that any charge carrier generated by said photosensor element is drained and thus does not disturb the sampled signal stored on storage means,

10 and wherein

during said first phase said photosensor element and said storage means are uncoupled from each other by means of the MOS transistor;

during said third phase said storage means, in a first stage, is released from said initialization voltage, then, in a second stage, is briefly coupled to said photosensor
15 element, thus allowing said sampled signal to be generated and stored in said storage means, and

during said fourth phase said photosensor element, in a first stage, is again initialized at said determined initialization voltage, then, in a second stage, said sampled signal which is stored on said storage means is read.

20 Regarding claim 3, in response to Applicant's amended claim 3, the amendment overcomes the previous objection of being dependent upon a rejected claim, as claim 3 has been rewritten in independent form, including all of the limitations of the base claim.

Regarding claims 4-6, in response to Applicant's amended claim 3, claims 4, 5 and 6 are also now allowable, as they are either directly or indirectly dependent upon an allowed claim.

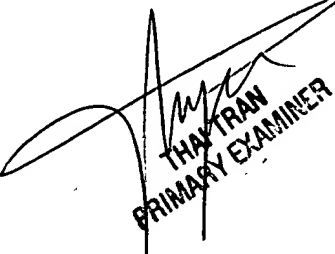
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary C. Vieaux whose telephone number is 571-272-7318. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Q. Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


THAI Q. TRAN
PRIMARY EXAMINER